# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Tazewell

**STREAM NAME:** Horsepen Creek

**HYDROLOGIC UNIT:** 05070201

**SEGMENT ID.:** VAS-Q01R_HRP01A98 **TMDL MAP ID:** VAS-Q01R-00

**SEGMENT SIZE:** 2.82 - Miles

**INITIAL LISTING:** 2002 **TMDL Schedule:** -

**UPSTREAM LIMIT:**

**DESCRIPTION:** Little Horsepen Creek confluence

**RIVER MILE:** 3.14

**LATITUDE:** 37.22667 **LONGTITUDE:** -81.52139

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** West Virginia State line

**RIVER MILE:** 0.32

**LATITUDE:** 37.20861 **LONGTITUDE:** -81.55778

This segment includes the mainstem of Horsepen Creek from its confluence with Little Horsepen Creek at stream mile 3.14 downstream to Bishop and the West Virginia state line at stream mile 0.44. This Creek flows along the West Virginia and Virginia State line.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Aquatic Life Use - Threatened

| IMPAIRMENT CAUSE: | IMPAIRMENT SOURCE |
|---|---|
| General Standard (Benthic) | Resource Extraction |
| | NPS - Silvaculture |

**SUMMARY:**

Biological monitoring of the stream using RPB2 protocol indicated a moderately impaired rating in May 1996. The biological monitoring site is HAP000.63.

The predominant land use in the headwaters is coal mining or resource extraction. This is the probable source for the degraded stream.

# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Buchanan

**STREAM NAME:** Garden Creek

**HYDROLOGIC UNIT:** 05070202

**SEGMENT ID.:** VAS-Q04R_GAR01A98 **TMDL MAP ID:** VAS-Q04R-02

**SEGMENT SIZE:** 1.82 - Miles

**INITIAL LISTING:** 1998 **TMDL Schedule:** 2004 - 2006

**UPSTREAM LIMIT:**

**DESCRIPTION:** Right Fork confluence

**RIVER MILE:** 1.82

**LATITUDE:** 37.18889 **LONGTITUDE:** -82.00444

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** Levisa Fork River confluence

**RIVER MILE:** 0.00

**LATITUDE:** 37.21222 **LONGTITUDE:** -82.00639

This includes a segment of Garden Creek from its confluence with Right Fork to the confluence with Levisa Fork River.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Fish Consumption Use - Threatened

| IMPAIRMENT CAUSE: | IMPAIRMENT SOURCE |
|---|---|
| General Standard (Benthic) | NPS - Urban |
| | Habitat Alteration |
| Fish Tissue - Arsenic | Unknown |

**SUMMARY:**

Fecal Coliform violations at 6AGAR000.16 are the reason this segment does not support swimmable uses 8 of 23 samples violated. Recent biological assessments indicate that there is an improvement in the severity of benthic impairment so that the segment is rated partially supporting aquatic life this cycle. The last three assessments have been moderately impaired at station 6AGAR000.16. Arsenic was found in fish tissue at 6AGAR001.78.

Land uses in the watershed, resource extraction and dense population settlement along the stream, contribute to these violations.

# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Buchanan

**STREAM NAME:** Dismal Creek

**HYDROLOGIC UNIT:** 05070202

**SEGMENT ID.:** VAS-Q05R_DIS01B02 **TMDL MAP ID:** VAS-Q05R-00

**SEGMENT SIZE:** 12.11 - Miles

**INITIAL LISTING:** 2002 **TMDL Schedule:** -

**UPSTREAM LIMIT:**

**DESCRIPTION:** Hurricane Branch confluence

**RIVER MILE:** 17.43

**LATITUDE:** 37.23417 **LONGTITUDE:** -81.86278

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** Long Branch confluence

**RIVER MILE:** 5.32

**LATITUDE:** 37.25389 **LONGTITUDE:** -81.98778

This segment extends from Hurricane Branch confluence to confluence with Long Branch.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Fish Consumption Use - Threatened

| IMPAIRMENT CAUSE: | IMPAIRMENT SOURCE |
|---|---|
| Fish Tissue - PCBs, Arsenic | Unknown |

**SUMMARY:**

A fish tissue station located at 6ADIS010.02 has arsenic and PCB detected.

The source is unknown.

# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Buchanan

**STREAM NAME:** Big Prater Creek

**HYDROLOGIC UNIT:** 05070202

**SEGMENT ID.:** VAS-Q06R_BIP01A98 **TMDL MAP ID:** VAS-Q06R-00

**SEGMENT SIZE:** 1.11 - Miles

**INITIAL LISTING:** 2002 **TMDL Schedule:** -

**UPSTREAM LIMIT:**

**DESCRIPTION:** Trace Fork Branch confluence

**RIVER MILE:** 1.11

**LATITUDE:** 37.21806 **LONGTITUDE:** -82.10222

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** Levisa River confluence

**RIVER MILE:** 0.00

**LATITUDE:** 37.23139 **LONGTITUDE:** -82.09917

This segment consist of the Big Prater Creek from Trace Fork Branch to confluence with Levisa River.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Aquatic Life Use - Threatened

| IMPAIRMENT CAUSE: | IMPAIRMENT SOURCE |
|---|---|
| General Standard (Benthic) | Unknown |

**SUMMARY:**

The benthic monitoring RBP II assessment at 6ABIP000.65, for 8/5/96 is moderately impaired. Heavy siltation and poor habitat are cited observances.

The predominant land use is coal mining. This land use is associated with stream sedimentation which was noted by the biological monitoring report. The stream side is densely settled with homes on small lots between steep mountainsides and stream banks.

# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Buchanan

**STREAM NAME:** Levisa Fork River

**HYDROLOGIC UNIT:** 05070202

**SEGMENT ID.:** VAS-Q06R_LEV01A98 **TMDL MAP ID:** VAS-Q06R-01

**SEGMENT SIZE:** 8.08 - Miles

**INITIAL LISTING:** 2002 **TMDL Schedule:** 2010 - 2014

**UPSTREAM LIMIT:**

**DESCRIPTION:** Dismal Creek confluence

**RIVER MILE:** 151.84

**LATITUDE:** 37.23333 **LONGTITUDE:** -82.04389

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** Slate Creek confluence

**RIVER MILE:** 143.76

**LATITUDE:** 37.27833 **LONGTITUDE:** -82.10111

This segment of Levisa Fork River includes the mainstem from its confluence with Dismal Creek on Route 460 to confluence with Slate Creek in Grundy.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Aquatic Life Use - Threatened

| IMPAIRMENT CAUSE: | IMPAIRMENT SOURCE |
|---|---|
| General Standard (Benthic) | Unknown |
| General Standard (Sediments-Ni) | |
| Fish Tissue - PCBs | |

**SUMMARY:**

The sediment analysis at ambient water quality monitoring station 6ALEV143.86 has effect range - median (ER-M) value exceedences for nickel. These exceedences are the cause of the threatened status for the mainstem. 6ALEV143.80 is a biological monitoring station in this reach with moderate impairment ratings. PCB was detected in the fish tissue of 3 species at station 6ALEV145.86 and in one species at 6ALEV151.26.

Metal sources are unknown. However, resource extraction of coal is the predominant land use in this watershed. Nickel may be due to either urban nonpoint sources or resource extraction. More research is recommended to identify a source for both nickel and PCB.

# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Buchanan

**STREAM NAME:** Levisa Fork River

**HYDROLOGIC UNIT:** 05070202

**SEGMENT ID.:** VAS-Q08R_LEV01A00 **TMDL MAP ID:** VAS-Q08R-02

**SEGMENT SIZE:** 2.66 - Miles

**INITIAL LISTING:** 1994 **TMDL Schedule:** 2008 - 2010

**UPSTREAM LIMIT:**

**DESCRIPTION:** Rocklick Creek confluence

**RIVER MILE:** 132.66

**LATITUDE:** 37.35528 **LONGTITUDE:** -82.18972

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** Kentucky State line

**RIVER MILE:** 130.00

**LATITUDE:** 37.36361 **LONGTITUDE:** -82.21750

This segment begins at the confluence with Rocklick Creek near Route 645, northeast of Weller and ends at the state line.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Aquatic Life Use - Threatened

| IMPAIRMENT CAUSE: | IMPAIRMENT SOURCE |
|---|---|
| General Standard (Benthic) | Resource Extraction |
| VDH Fish Consumption (PCB) | Unknown |
| General Standard (Sediment - PCB) | |

**SUMMARY:**

A biological station, 6ALEV130.29 is moderately impaired. This segment has been extended. Virginia Department of Health has posted a twelve miles segment for fish consumption due to PCB in fish tissue at stations 6ALEV134.82 and 6ALEV130.00. The fish consumption segment extends to an adjacent segment.

Resource extraction, high population density and urban activities are probably sources of these concerns. The PCB source is unknown.

# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Buchanan

**STREAM NAME:** Levisa Fork River

**HYDROLOGIC UNIT:** 05070202

**SEGMENT ID.:** VAS-Q08R_LEV02A00 **TMDL MAP ID:** VAS-Q08R-03

**SEGMENT SIZE:** 9.34 - Miles

**INITIAL LISTING:** 2002 **TMDL Schedule:** 2010 - 2014

**UPSTREAM LIMIT:**

**DESCRIPTION:** River Mile 142.00

**RIVER MILE:** 142.00

**LATITUDE:** 37.29028 **LONGTITUDE:** -82.12639

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** Rocklick Creek confluence

**RIVER MILE:** 132.66

**LATITUDE:** 37.35528 **LONGTITUDE:** -82.18972

The Fish Consumption segment is 12 miles long. It extends from Grundy, just upstream of confluence with Six and Twenty Mile Creek downstream to Rocklick Branch.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Aquatic Life Use - Threatened

| IMPAIRMENT CAUSE: | IMPAIRMENT SOURCE |
|---|---|
| VDH Health Advisory (PCB) | Unknown |
| General Standard (Sediments-PCB) | |

**SUMMARY:**

PCB in Fish Tissue at a special monitoring station, 6ALEV130.00, is the cause of impairment. This sample was in 1997.

The source of PCB contamination is unknown.

# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Wise

**STREAM NAME:** Cranesnest River arm of Flannagan Reservoir

**HYDROLOGIC UNIT:** 05070202

**SEGMENT ID.:** VAS-Q13L_PNR01A02 **TMDL MAP ID:** VAS-Q13L-01

**SEGMENT SIZE:** 1143 - Acres

**INITIAL LISTING:** 2002 **TMDL Schedule:** 2010 - 2014

**UPSTREAM LIMIT:**

**DESCRIPTION:** Cranesnest River arm of Flannagan Dam headwaters

**RIVER MILE:** 8.00

**LATITUDE:** 37.02111 **LONGTITUDE:** -82.40528

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** Flannagan Dam

**RIVER MILE:** 0.00

**LATITUDE:** 37.23306 **LONGTITUDE:** -82.34500

Flannagan Reservoir is northeast of Clintwood and includes the confluence of Pound River and Cranesnest River. The segment includes the entire lake.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Fish Consumption Use - Threatened

| IMPAIRMENT CAUSE: | IMPAIRMENT SOURCE |
|---|---|
| Fish Tissue - Arsenic, Aldrin | Organic Enrichment, DO |
| | Unknown |

**SUMMARY:**

A lake monitoring station at 6ACNR001.03 has low DO values, other stations in the lake include 6APNR007.67 and 6APNE007.67. Special fish tissue station at 6APNR002.15 had Aldrin and arsenic detected.

The source is due to natural lake processes.

# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Wise

**STREAM NAME:** North Fork Pound Reservoir

**HYDROLOGIC UNIT:** 05070202

**SEGMENT ID.:** VAS-Q13L_PNK01A02 **TMDL MAP ID:** VAS-Q13L-02

**SEGMENT SIZE:** 154 - Acres

**INITIAL LISTING:** 2002 **TMDL Schedule:** -

**UPSTREAM LIMIT:**

**DESCRIPTION:** Headwaters

**RIVER MILE:** 4.50

**LATITUDE:** 37.10417 **LONGTITUDE:** -82.67333

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** North Fork Pound Dam

**RIVER MILE:** 1.11

**LATITUDE:** 37.12556 **LONGTITUDE:** -82.63000

North Fork Pound Reservoir is west of Pound in Wise County.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Fish Consumption Use - Threatened

| IMPAIRMENT CAUSE: | IMPAIRMENT SOURCE |
|---|---|
| Fish Tissue - Mercury | Unknown |

**SUMMARY:**

A lake monitoring station at 6APNK001.29 indicates mercury in fish tissue.

The source is unknown.

# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Buchanan

**STREAM NAME:** South Fork Pound River

**HYDROLOGIC UNIT:** 05070202

**SEGMENT ID.:** VAS-Q13R_PNS01A02 **TMDL MAP ID:** VAS-Q13R-06

**SEGMENT SIZE:** 5.31 - Miles

**INITIAL LISTING:** 2002 **TMDL Schedule:** -

**UPSTREAM LIMIT:**

**DESCRIPTION:** Donald, Phillps confluence

**RIVER MILE:** 9.62

**LATITUDE:** 37.06306 **LONGTITUDE:** -82.69806

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** Glady Fork confluence

**RIVER MILE:** 4.31

**LATITUDE:** 37.09000 **LONGTITUDE:** -82.63306

This segment begins at the Donald Branch and Phillips Creek confluence which are the headwaters. It ends downstream at the Glady Fork confluence. Route 627 follows this segment of the River west of Pound, Virginia.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Aquatic Life Use - Threatened

| IMPAIRMENT CAUSE: | IMPAIRMENT SOURCE |
|---|---|
| General Standard (Benthic) | Unknown |

**SUMMARY:**

There is a biological station at 6APNS004.98 with data that rates the segment threatened.

The source is unknown.

# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Wise

**STREAM NAME:** Pound River

**HYDROLOGIC UNIT:** 05070202

**SEGMENT ID.:** VAS-Q13R_PNR01A00 **TMDL MAP ID:** VAS-Q13R-00

**SEGMENT SIZE:** 15.67 - Miles

**INITIAL LISTING:** 2002 **TMDL Schedule:** -

**UPSTREAM LIMIT:**

**DESCRIPTION:** Georges Fork confluence

**RIVER MILE:** 33.12

**LATITUDE:** 37.12306 **LONGTITUDE:** -82.61306

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** Indian Creek confluence

**RIVER MILE:** 17.45

**LATITUDE:** 37.18139 **LONGTITUDE:** -82.48278

This segment is the mainstem of Pound River from Indian Creek confluence, downstream of the North Fork Pound Lake, to the confluence with Georges Fork.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Aquatic Life Use - Threatened

| IMPAIRMENT CAUSE: | IMPAIRMENT SOURCE |
|---|---|
| Nickel | Unknown |
| General Standard (Benthic) | |

**SUMMARY:**

An ambient monitoring station, 6APNR023.86 had exceedences for Nickel in the sediments. A biological station at 6APNR028.76 rates the segment threatened.

The source of impairment is unknown, however nickel in sediments is not naturally occuring and may be associated with solid waste disposal. A study should be done to determine the source.

# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Tazewell

**STREAM NAME:** Clinch River

**HYDROLOGIC UNIT:** 06010205

**SEGMENT ID.:** VAS-P02R_CLN01A98 **TMDL MAP ID:** VAS-P02R-00

**SEGMENT SIZE:** 6.02 - Miles

**INITIAL LISTING:** 2002 **TMDL Schedule:** -

**UPSTREAM LIMIT:**

**DESCRIPTION:** Plum Creek confluence

**RIVER MILE:** 345.10

**LATITUDE:** 37.12417 **LONGTITUDE:** -81.56750

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** Pounding Mill Branch confluence

**RIVER MILE:** 339.08

**LATITUDE:** 37.07583 **LONGTITUDE:** -81.71361

The segment begins just southwest of Tazewell at the confluence of Plum Creek and extends to the confluence with Pounding Mill Branch in Pounding Mill. Small communities of Pisgah, Maxwell, Cliffield and Gillespie are along Clinch River with Route 19/460 following the River course.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Aquatic Life Use - Threatened

| IMPAIRMENT CAUSE: | IMPAIRMENT SOURCE |
|---|---|
| General Standard (Sediment-PCB) | Unknown |

**SUMMARY:**

This segment is considered threatened because of ambient monitoring, 6BCLN339.53, which had two effect range - median (ER-M) value exceedences for PCB.

The PCB source is unknown.

# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Tazewell

**STREAM NAME:** Indian Creek

**HYDROLOGIC UNIT:** 06010205

**SEGMENT ID.:** VAS-P02R_IDI01A00 **TMDL MAP ID:** VAS-P02R-01

**SEGMENT SIZE:** 13.37 - Miles

**INITIAL LISTING:** 2002 **TMDL Schedule:** -

**UPSTREAM LIMIT:**

**DESCRIPTION:** North Branch Indian Creek confluence

**RIVER MILE:** 13.37

**LATITUDE:** 37.21083 **LONGTITUDE:** -81.71750

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** Clinch River confluence

**RIVER MILE:** 0.00

**LATITUDE:** 37.08889 **LONGTITUDE:** -81.76806

The segment begins at the headwaters of Indian Creek and extends to the Clinch River confluence. It flows parallel to Route 627 through communities of Harman, Bandy and confluences with Clinch River at Cedar Bluff.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Aquatic Life Use - Threatened

| IMPAIRMENT CAUSE: | IMPAIRMENT SOURCE |
|---|---|
| General Standard (Benthic) | Unknown |

**SUMMARY:**

This segment is considered threatened because of biological monitoring stations at 6BIDI003.67, 6BIDI000.55, and 6BIDI010.25.

The source is unknown.

# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Tazewell

**STREAM NAME:** Clinch River

**HYDROLOGIC UNIT:** 06010205

**SEGMENT ID.:** VAS-P03R_CLN01A98 **TMDL MAP ID:** VAS-P03R-02

**SEGMENT SIZE:** 3.1 - Miles

**INITIAL LISTING:** 2002 **TMDL Schedule:** 2010 - 2014

**UPSTREAM LIMIT:**

**DESCRIPTION:** Raven Doran Raw Water Intake

**RIVER MILE:** 316.53

**LATITUDE:** 37.09083 **LONGTITUDE:** -81.82167

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** Mill Creek confluence

**RIVER MILE:** 313.43

**LATITUDE:** 37.08333 **LONGTITUDE:** -81.85583

The segment extends from the Raven-Doran raw water intake, just above the Town Hill Creek confluence, to the confluence with Mill Creek at the watershed boundary. Clinch River flows through the communities of Doran and Raven.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Aquatic Life Use - Threatened

| IMPAIRMENT CAUSE: | IMPAIRMENT SOURCE |
|---|---|
| General Standard (Sediment-PCP) | NPS - Urban |
| | Unknown |

**SUMMARY:**

There were fecal coliform violations, 4 out of 38 samples, at station 6BCLN315.11. An organic exceedence in sediments at this same location results in a threatened assessment for PCP.

Fecal violations may be attributed to Urban Nonpoint Sources. The urban area is located directly on the floodplain. The segment is threatened for PCP in sediments. This source is unknown.

# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Scott

**STREAM NAME:** Clinch River

**HYDROLOGIC UNIT:** 06010205

**SEGMENT ID.:** VAS-P09R_CLN01A00 **TMDL MAP ID:** VAS-P09R-00

**SEGMENT SIZE:** 6.07 - Miles

**INITIAL LISTING:** 2002 **TMDL Schedule:** -

**UPSTREAM LIMIT:**

**DESCRIPTION:** Little Stoney Creek confluence

**RIVER MILE:** 238.68

**LATITUDE:** 36.84639 **LONGTITUDE:** -82.45250

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** Staunton Creek confluence

**RIVER MILE:** 232.61

**LATITUDE:** 36.79722 **LONGTITUDE:** -82.51861

This segment of Clinch River flows through Dungannon and extends from the Little Stoney Creek confluence to the Staunton Creek confluence. The northern shore of the river is the National Forest boundary.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Fish Consumption Use - Threatened

| IMPAIRMENT CAUSE: | IMPAIRMENT SOURCE |
|---|---|
| Fish Tissue - PCBs, Lead | Unknown |
| General Standard (Sediment-PCP) | |

**SUMMARY:**

An ambient station is at 6BCLN237.90. A special fish tissue station, 6BCLN236.00, yielded PCB values above the human health screening values, lead was also found in the fish tissue.

The source of these exceedences is unknown. A level 2 study is necessary to determine the extent and source of PCB and lead.

# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Scott

**STREAM NAME:** Clinch River

**HYDROLOGIC UNIT:** 06010205

**SEGMENT ID.:** VAS-P09R_CLN01C00 **TMDL MAP ID:** VAS-P09R-01

**SEGMENT SIZE:** 11.97 - Miles

**INITIAL LISTING:** 2002 **TMDL Schedule:** -

**UPSTREAM LIMIT:**

**DESCRIPTION:** Dumps Creek confluence

**RIVER MILE:** 267.90

**LATITUDE:** 36.93472 **LONGTITUDE:** -82.19722

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** Lick Creek confluence

**RIVER MILE:** 255.93

**LATITUDE:** 36.90583 **LONGTITUDE:** -82.29861

This segment of Clinch River flows from Carbo at the Dumps Creek confluence downstream to St. Paul and the Lick Creek confluence. The segment flows parallel to State Route 628, ending at the U.S. Alternate Route 58.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Aquatic Life Use - Threatened

| IMPAIRMENT CAUSE: | IMPAIRMENT SOURCE |
|---|---|
| General Standard (Benthic) | Unknown |
| General Standard (Sediment-As) | |

**SUMMARY:**

A biological monitoring station at 6BCLN264.96 is ranked as threatened. There was also fish tissue samples collected at the same location with arsenic detected in the samples.

The source of the threat is unknown.

# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Wise

**STREAM NAME:** Guest River

**HYDROLOGIC UNIT:** 06010205

**SEGMENT ID.:** VAS-P11R_GUE01A00 **TMDL MAP ID:** VAS-P11R-10

**SEGMENT SIZE:** 4.07 - Miles

**INITIAL LISTING:** 2002 **TMDL Schedule:** 2010 - 2014

**UPSTREAM LIMIT:**

**DESCRIPTION:** Crab Orchard Creek confluence

**RIVER MILE:** 4.07

**LATITUDE:** 36.91139 **LONGTITUDE:** -82.43611

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** Clinch River

**RIVER MILE:** 0.00

**LATITUDE:** 36.87639 **LONGTITUDE:** -82.40639

The segment includes the mainstem of Guest River from its confluence with Crab Orchard Creek to its confluence with the Clinch River. This segment flows through the Washington-Jefferson National Forest below the town of Coeburn. The tributaries that were associated with the 1998 TMDL have been listed separately for clarity.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Aquatic Life Use - Threatened

| IMPAIRMENT CAUSE: | IMPAIRMENT SOURCE |
|---|---|
| General Standard (Phosphorus) | NPS - Septage |
| | Unknown |

**SUMMARY:**

USGS station shows fecal coliform violations. Phosphorus was above the human health screening values.

The sources for these exceedences may be land disposal and septage disposal.

# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Scott

**STREAM NAME:** Stony Creek

**HYDROLOGIC UNIT:** 06010205

**SEGMENT ID.:** VAS-P12R_SNY01A00 **TMDL MAP ID:** VAS-P12R-00

**SEGMENT SIZE:** 6.16 - Miles

**INITIAL LISTING:** 2002 **TMDL Schedule:** -

**UPSTREAM LIMIT:**

**DESCRIPTION:** Chimney Rock Fork confluence

**RIVER MILE:** 6.16

**LATITUDE:** 36.83361 **LONGTITUDE:** -82.59861

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** Clinch River confluence

**RIVER MILE:** 0.00

**LATITUDE:** 36.77000 **LONGTITUDE:** -82.57694

This Stony Creek segment is the lower reach of the stream to its confluence with Clinch River near Ft. Blackmore on Route 65. It flows through the communities of Ka and Lano, along Route 619.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Aquatic Life Use - Threatened

| IMPAIRMENT CAUSE: | IMPAIRMENT SOURCE |
|---|---|
| General Standard (Benthic) | Unknown |

**SUMMARY:**

A biological monitoring station, 6BSNY000.23, indicates the stream may be threatened for aquatic life uses because May 97 not impaired, October 1997 it was rated slightly impaired and in May 1998 is was rated moderately impaired.

The source is unknown.

# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Scott

**STREAM NAME:** Clinch River

**HYDROLOGIC UNIT:** 06010205

**SEGMENT ID.:** VAS-P13R_CLN01A02 **TMDL MAP ID:** VAS-P13R-02

**SEGMENT SIZE:** 9.66 - Miles

**INITIAL LISTING:** 2002 **TMDL Schedule:** -

**UPSTREAM LIMIT:**

**DESCRIPTION:** Copper Creek confluence

**RIVER MILE:** 211.60

**LATITUDE:** 36.65500 **LONGTITUDE:** -82.74528

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** Tennessee State Line

**RIVER MILE:** 201.94

**LATITUDE:** 36.59361 **LONGTITUDE:** -82.88972

This segment begins at the confluence with Copper Creek, near Speers Ferry, and extends to the Tennessee State Line. The river flows along Route 625.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Aquatic Life Use - Threatened, Fish Consumption Use - Threatened

| IMPAIRMENT CAUSE: | IMPAIRMENT SOURCE |
|---|---|
| DDT | Unknown |
| Fish Tissue - Arsenic, Mercury | |

**SUMMARY:**

A special study station, at 6BCLN203.38, had DDT in the sediments in 1996. A second station at 6BCLN211.00 has Arsenic and Mercury detected in fish tissue.

The source of the DDT is unknown. The area along the stream banks is mostly rural and agricultural.

# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Scott

**STREAM NAME:** Stock Creek

**HYDROLOGIC UNIT:** 06010205

**SEGMENT ID.:** VAS-P13R_STO01A00 **TMDL MAP ID:** VAS-P13R-00

**SEGMENT SIZE:** 4.53 - Miles

**INITIAL LISTING:** 2002 **TMDL Schedule:** -

**UPSTREAM LIMIT:**

**DESCRIPTION:** River Mile 4.53

**RIVER MILE:** 4.53

**LATITUDE:** 36.71833 **LONGTITUDE:** -82.75000

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** Clinch River confluence

**RIVER MILE:** 0.00

**LATITUDE:** 36.67361 **LONGTITUDE:** -82.75528

This Stock Creek segment is the lower reach of the stream to its confluence with Clinch River near Duffield in Scott County.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Aquatic Life Use - Threatened, Aquatic Life Use - Threatened

| IMPAIRMENT CAUSE: | IMPAIRMENT SOURCE |
|---|---|
| General Standard (Sediment-PCP) | Unknown |

**SUMMARY:**

An ambient water quality monitoring station, 6BSTO004.56, indicates there are PCP effect range-median exceedences.

The source of PCP is unknown. Stock Creek is located in karst geology and is influenced by groundwater.

# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Scott

**STREAM NAME:** Copper Creek

**HYDROLOGIC UNIT:** 06010205

**SEGMENT ID.:** VAS-P14R_COP01A02 **TMDL MAP ID:** VAS-P14R-00

**SEGMENT SIZE:** 13.77 - Miles

**INITIAL LISTING:** 2002 **TMDL Schedule:** -

**UPSTREAM LIMIT:**

**DESCRIPTION:** Obeys Creek confluence

**RIVER MILE:** 13.77

**LATITUDE:** 36.68083 **LONGTITUDE:** -82.55306

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** Clinch River confluence

**RIVER MILE:** 0.00

**LATITUDE:** 36.65528 **LONGTITUDE:** -82.74528

This is the lower segment of Copper Creek from the confluence with Obeys Creek at State Route 72 downstream to its confluence with Clinch River near Speers Ferry on Route 23. The stream flows along Route 627 for the length of this segment, through the community of Bellamy.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Aquatic Life Use - Threatened, Fish Consumption Use - Threatened

| IMPAIRMENT CAUSE: | IMPAIRMENT SOURCE |
|---|---|
| General Standard (Benthic) | Unknown |
| Fish Tissue - Arsenic | |

**SUMMARY:**

A biological monitoring station, 6BCOP002.68, indicates the stream may be threatened for aquatic life uses. Special Study station at 6BCOP002.00 detected arsenic in fish tissue, hence the fish consumption threat.

The source is unknown.

# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Scott

**STREAM NAME:** North Fork Clinch River

**HYDROLOGIC UNIT:** 06010205

**SEGMENT ID.:** VAS-P15R_NFC01C02 **TMDL MAP ID:** VAS-P15R-00

**SEGMENT SIZE:** 5.58 - Miles

**INITIAL LISTING:** 2002 **TMDL Schedule:** 2010 - 2014

**UPSTREAM LIMIT:**

**DESCRIPTION:** Fraley Creek confluence

**RIVER MILE:** 19.09

**LATITUDE:** 36.63000 **LONGTITUDE:** -82.91306

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** Tennessee State Line

**RIVER MILE:** 13.51

**LATITUDE:** 36.59361 **LONGTITUDE:** -82.98500

This segment of North Fork Clinch River extends from its confluence with Fraley Creek to the Tennessee State Line. The River flows through the communities of Powers Ford, Fairview and Dona.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Aquatic Life Use - Threatened

| IMPAIRMENT CAUSE: | IMPAIRMENT SOURCE |
|---|---|
| General Standard (Sediment-PCP) | NPS - Agriculture |
| | Unknown |

**SUMMARY:**

An ambient monitoring station, 6BNCC0-3.80, has fecal coliform violations in 3 of 21 samples. The ambient sediment sample had sediment PCP values above the ER-M.

The source is agriculture.

# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Wise

**STREAM NAME:** Roaring Branch

**HYDROLOGIC UNIT:** 06010206

**SEGMENT ID.:** VAS-P17R_RRN01A00 **TMDL MAP ID:** VAS-P17R-04

**SEGMENT SIZE:** 2.87 - Miles

**INITIAL LISTING:** 2002 **TMDL Schedule:** -

**UPSTREAM LIMIT:**

**DESCRIPTION:** Headwaters

**RIVER MILE:** 2.87

**LATITUDE:** 36.85639 **LONGTITUDE:** -82.82500

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** Powell River confluence

**RIVER MILE:** 0.00

**LATITUDE:** 36.88389 **LONGTITUDE:** -82.78750

The segment begins the headwaters and ends at its confluence with Powell River at Route 23. This small tributary is located just south of Appalachia.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Aquatic Life Use - Threatened

| IMPAIRMENT CAUSE: | IMPAIRMENT SOURCE |
|---|---|
| General Standard (Benthic) | Unknown |

**SUMMARY:**

There is a U. S. Forest Service biological monitoring station, 9106, that rates this segment threatened.

The source for this segment being threatened is unknown.

# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Wise

**STREAM NAME:** Dark Hollow

**HYDROLOGIC UNIT:** 06010206

**SEGMENT ID.:** VAS-P17R_DAR01A02 **TMDL MAP ID:** VAS-P17R-00

**SEGMENT SIZE:** 1.32 - Miles

**INITIAL LISTING:** 2002 **TMDL Schedule:** -

**UPSTREAM LIMIT:**

**DESCRIPTION:** Headwaters

**RIVER MILE:** 1.32

**LATITUDE:** 36.89333 **LONGTITUDE:** -82.76556

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** Powell River confluence

**RIVER MILE:** 0.00

**LATITUDE:** 36.88944 **LONGTITUDE:** -82.78833

The segment begins the headwaters and ends at its confluence with Powell River at Route 23. This small tributary is located just south of Appalachia.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Aquatic Life Use - Threatened

| IMPAIRMENT CAUSE: | IMPAIRMENT SOURCE |
|---|---|
| General Standard (Benthic) | Unknown |

**SUMMARY:**

There is a U. S. Forest Service biological monitoring station, 9113, that rates this segment threatened.

The source for this segment being threatened is unknown.

# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Wise

**STREAM NAME:** Poor Valley Creek

**HYDROLOGIC UNIT:** 06010206

**SEGMENT ID.:** VAS-P19R_PVC01A02 **TMDL MAP ID:** VAS-P19R-01

**SEGMENT SIZE:** 2.67 - Miles

**INITIAL LISTING:** 2002 **TMDL Schedule:** -

**UPSTREAM LIMIT:**

**DESCRIPTION:** Headwaters

**RIVER MILE:** 2.67

**LATITUDE:** 36.79167 **LONGTITUDE:** -82.96361

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** Powell River confluence

**RIVER MILE:** 0.00

**LATITUDE:** 36.79444 **LONGTITUDE:** -82.92028

The segment begins the headwaters and ends at its confluence with Powell River. It flows along Route 621 in Lee County.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Aquatic Life Use - Threatened

**IMPAIRMENT CAUSE:** **IMPAIRMENT SOURCE**

General Standard (Benthic)

**SUMMARY:**

There is a U. S. Forest Service biological monitoring station, 9120, that rates this segment threatened.

The source for this segment being threatened is unknown.

# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Lee

**STREAM NAME:** Powell River

**HYDROLOGIC UNIT:** 06010206

**SEGMENT ID.:** VAS-P19R_POW03A00 **TMDL MAP ID:** VAS-P19R-00

**SEGMENT SIZE:** 16.56 - Miles

**INITIAL LISTING:** 2002 **TMDL Schedule:** -

**UPSTREAM LIMIT:**

**DESCRIPTION:** South Fork Powell River confluence

**RIVER MILE:** 179.54

**LATITUDE:** 36.86167 **LONGTITUDE:** -82.78889

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** Upstream end of Public Water Supply Segment

**RIVER MILE:** 162.98

**LATITUDE:** 36.75944 **LONGTITUDE:** -82.96278

This segment is above the public water supply on Powell River. The Powell flows below Big Stone Gap and around the community of Dryden on Route 58A.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Aquatic Life Use - Threatened

| IMPAIRMENT CAUSE: | IMPAIRMENT SOURCE |
|---|---|
| General Standard (Benthic) | Unknown |
| General Standard (Sediment-PCP) | |

**SUMMARY:**

A biological monitoring station, 6BPOW166.92, was rated moderately impaired and an ambient monitoring station, 6BPOW165.78, had PCP effect range - median (ER-M) value exceedences in a sediment sample. Furthermore, a U.S. Forest biological monitoring station in this reach is also impaired.

The source is unknown. More investigation is needed to address the source.

# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Lee

**STREAM NAME:** Lake Keokee

**HYDROLOGIC UNIT:** 06010206

**SEGMENT ID.:** VAS-P20L_PWL01L02 **TMDL MAP ID:** VAS-P20L-01

**SEGMENT SIZE:** 100 - Acres

**INITIAL LISTING:** 2002 **TMDL Schedule:** 2010 - 2014

**UPSTREAM LIMIT:**

**DESCRIPTION:** Keokee Backwaters

**RIVER MILE:** 25.31

**LATITUDE:** 36.85139 **LONGTITUDE:** -82.85194

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** Keokee Dam

**RIVER MILE:** 24.66

**LATITUDE:** 36.84528 **LONGTITUDE:** -82.86694

Lake Keokee is on top of the Mountains and is located southeast of Keokee off Route 606 and 876.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Fish Consumption Use - Threatened

| IMPAIRMENT CAUSE: | IMPAIRMENT SOURCE |
|---|---|
| Fish Tissue - Mercury | Organic Enrichment, DO, pH |
| | Unknown |

**SUMMARY:**

Lake monitoring stations, 6BPWL024.64 and 6BPWL025.20 have both DO and pH violations. This segment includes the entire lake. A fish tissue station at 6BPWL025.32 indicates mercury in fish tissue in two species.

The source is due to natural lake processes. However, the source of mercury is unknown

# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Lee

**STREAM NAME:** Straight Creek

**HYDROLOGIC UNIT:** 06010206

**SEGMENT ID.:** VAS-P20R_SRA01A94 **TMDL MAP ID:** VAS-P20R-02

**SEGMENT SIZE:** 6.66 - Miles

**INITIAL LISTING:** 1996 **TMDL Schedule:** 2000 - 2004

**UPSTREAM LIMIT:**

**DESCRIPTION:** Straight Creek headwaters

**RIVER MILE:** 6.66

**LATITUDE:** 36.84889 **LONGTITUDE:** -83.04139

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** North Fork Powell River confluence

**RIVER MILE:** 0.00

**LATITUDE:** 36.77694 **LONGTITUDE:** -83.05111

This segment includes the mainstem of Straight Creek from its headwaters north of Monarch to its confluence with North Fork Powell River. This stream flows through St. Charles. The mainstem of Straight Creek was listed on the 1994 TMDL report for fecal coliform violations and 1996 TMDL report for benthic impairment.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Fish Consumption Use - Threatened, Aquatic Life Use - Threatened

| IMPAIRMENT CAUSE: | IMPAIRMENT SOURCE |
|---|---|
| Fish Tissue - PCBs, General Standard (Sediment-Ni) | NPS - Urban |
| | Resource Extraction |
| | Unknown |

**SUMMARY:**

Biological monitoring stations, 6BSTA000.11, 6BSRA000.4, 6BSRA000.54, 6BSRA001.10, 6BSRA002.48, 6BSRA003.62 show that the stream is moderately impaired. The biologist notes that there is embeddedness and the streambank stability is poor. A special study station at 6BSRA001.34 had fish tissue date for PCB which exceeds the human health screening value. The ambient water quality monitoring station, 6BSRA001.11, has fecal coliform violations and Nickle was detected in sediment data.

The source of the fecal coliform violations is numerous raw sewerage discharges. The upper reaches are not connected to public sewer. St. Charles STP has had inflow and infiltration problems in this segment also. Coal mining and coal preparation plants in this watershed contribute to benthic impacts. There is acid mine drainage on tributaries to Straight Creek and abandoned mine sites which have adversely impacted aquatic habitat.

# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Lee

**STREAM NAME:** North Fork Powell River

**HYDROLOGIC UNIT:** 06010206

**SEGMENT ID.:** VAS-P20R_PWL03B02 **TMDL MAP ID:** VAS-P20R-08

**SEGMENT SIZE:** 2.92 - Miles

**INITIAL LISTING:** 2002 **TMDL Schedule:** 2010 - 2014

**UPSTREAM LIMIT:**

**DESCRIPTION:** Wolf Harbor Branch confluence

**RIVER MILE:** 8.95

**LATITUDE:** 36.79278 **LONGTITUDE:** -83.00889

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** Straight Creek confluence

**RIVER MILE:** 6.03

**LATITUDE:** 36.77694 **LONGTITUDE:** -83.05111

The segment includes mainstem of North Fork Powell River from the Wolf Hollow Branch confluence downstream to Straight Creek confluence near the community of Pocket.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Aquatic Life Use - Threatened

| IMPAIRMENT CAUSE: | IMPAIRMENT SOURCE |
|---|---|
| General Standard (Benthic) | NPS - Urban |

**SUMMARY:**

Biological monitoring station at 6BPWL006.65 was rated moderately impaired for one sampling event. Based on 2002 assessment guidance the segment is threatened and needs more monitoring.

Urban nonpoint source runoff is the suspected cause of habitat impairment.

# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Lee

**STREAM NAME:** North Fork Powell River

**HYDROLOGIC UNIT:** 06010206

**SEGMENT ID.:** VAS-P20R_PWL01A00 **TMDL MAP ID:** VAS-P20R-01

**SEGMENT SIZE:** 6.03 - Miles

**INITIAL LISTING:** 1994 **TMDL Schedule:** 2000 - 2004

**UPSTREAM LIMIT:**

**DESCRIPTION:** Straight Creek confluence

**RIVER MILE:** 6.03

**LATITUDE:** 36.77694 **LONGTITUDE:** -83.05111

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** Powell River confluence

**RIVER MILE:** 0.00

**LATITUDE:** 36.77694 **LONGTITUDE:** -83.05111

The segment includes mainstem of North Fork Powell River from the Straight Creek confluence near the community of Pocket to the confluence with Powell River. The North Fork Powell River flows through the town of Pennington Gap. The stream segment length is 2.31 miles longer than that listed on the 1998 TMDL list.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Fish Consumption Use - Threatened

| IMPAIRMENT CAUSE: | IMPAIRMENT SOURCE |
|---|---|
| Fish Tissue - Arsenic | Unknown |

**SUMMARY:**

Biological monitoring stations, 6BPWL005.46 and 6BPWL004.40, were rated moderately impaired in 1998. The biologist noted a high degree of embeddedness, moderate deposition and sub-optimal habitat diversity. In the 2002 assessment more recent benthic data results in a threatened designation. A fish tissue station, 6BPWL001.62, has arsenic in the fish tissue. This segment has been extended to its confluence with Powell River from earlier reports.

Urban nonpoint source runoff is the suspected cause of habitat impairment. Fecal coliform violations are also attributable to Urban sources. The source for arsenic in fish tissue is unknown. More study needs to be done to determine the sources.

# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Washington

**STREAM NAME:** South Fork Holston River

**HYDROLOGIC UNIT:** 06010102

**SEGMENT ID.:** VAS-O02R_SFH01B02 **TMDL MAP ID:** VAS-O02R-01

**SEGMENT SIZE:** 6.13 - Miles

**INITIAL LISTING:** 2002 **TMDL Schedule:** -

**UPSTREAM LIMIT:**

**DESCRIPTION:** Grosses Creek confluence

**RIVER MILE:** 89.64

**LATITUDE:** 36.74361 **LONGTITUDE:** -81.68806

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** Rush Creek confluence

**RIVER MILE:** 83.51

**LATITUDE:** 36.71583 **LONGTITUDE:** -81.74889

This South Fork Holston River segment is defined upstream by its confluence with Grosses Creek at Love Mill and downstream by the confluence with Rush Creek. This segment lies just south of the community of Friendship.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Fish Consumption Use - Threatened, Aquatic Life Use - Threatened

| IMPAIRMENT CAUSE: | IMPAIRMENT SOURCE |
|---|---|
| Fish Tissue - Arsenic, Lead, PCB | Unknown |
| General Standard (Sediment-Pb) | |

**SUMMARY:**

A special fish tissue sampling station, 6CSFH088.88, results indicated PCB, lead and arsenic concentration values above the human health screening values. Sediment analysis in 1997 indicated lead above effect range - median (ER-M) values at the same monitoring station.

The source of PCB, arsenic and lead are unknown. A level 2 study is recommended in order to determine the extent and source of these pollutants.

# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Smyth

**STREAM NAME:** Middle Fork Holston River

**HYDROLOGIC UNIT:** 06010102

**SEGMENT ID.:** VAS-O04R_MFH01A00 **TMDL MAP ID:** VAS-O04R-01

**SEGMENT SIZE:** 12.48 - Miles

**INITIAL LISTING:** 2002 **TMDL Schedule:** 2004 - 2010

**UPSTREAM LIMIT:**

**DESCRIPTION:** Hungry Mother Creek confluence

**RIVER MILE:** 40.43

**LATITUDE:** 36.82639 **LONGTITUDE:** -81.54250

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** Sulphur Spring Creek confluence

**RIVER MILE:** 27.95

**LATITUDE:** 36.79444 **LONGTITUDE:** -81.68500

The entire mainstem of Middle Fork Holston River in this watershed is part of the segment. It extends from Hungry Mother Creek confluence to Sulphur Spring Creek confluence.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Fish Consumption Use - Threatened

| IMPAIRMENT CAUSE: | IMPAIRMENT SOURCE |
|---|---|
| General Standard (PCB, Aldrin) | NPS - Agriculture |
| | Unknown |

**SUMMARY:**

The ambient monitoring station, 6CMFH033.40, has fecal violations. A special study station, 6CMFH033.40, had PCB and Aldrin concentrations in fish tissue above the human health screening values. Biological monitoring station, 6CMFH032.39, was not impaired.

The source for fecal coliform violations is probably agriculture. This area is in a wide flood plain with agricultural land use activities predominating. It is recommended that at second study be undertaken to determine the extent and source of these pollutants. The threatened pollutant sources is unknown.

# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Washington

**STREAM NAME:** South Fork Holston Lake

**HYDROLOGIC UNIT:** 06010102

**SEGMENT ID.:** VAS-O06L_SFH01A00 **TMDL MAP ID:** VAS-O06L-00

**SEGMENT SIZE:** 1810 - Acres

**INITIAL LISTING:** 2002 **TMDL Schedule:** 2010 - 2014

**UPSTREAM LIMIT:**

**DESCRIPTION:** Upper End of Lake

**RIVER MILE:** 72.30

**LATITUDE:** 36.65472 **LONGTITUDE:** -81.90361

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** Tennessee State Line

**RIVER MILE:** 62.85

**LATITUDE:** 36.59472 **LONGTITUDE:** -82.01194

The lake segment includes the upper end of the lake to the Tennessee State Line. The lake begins above the confluence of South Fork and Middle Fork Holston Rivers.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Fish Consumption Use - Threatened

| IMPAIRMENT CAUSE: | IMPAIRMENT SOURCE |
|---|---|
| Fish Tissue - PCBs, DDT | Natural |
| | Unknown |

**SUMMARY:**

A special study station, 6CSFH070.80, indicated that PCB and DDT were in fish tissue above the human health screening values. Lake monitoring stations are 6CSFH062.93, 6CSFH066.16. At station 6CSFH066.16, in the bottom layer, aquatic life use is not supported due to low dissolved oxygen.

The Dissolved Oxygen violations in the bottom layer of the lake are probably due to anaerobic conditions that occur in lake bottoms. The source for PCB and DDT is unknown. More study is needed to determine the extent and source of this pollutant.

# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Washington

**STREAM NAME:** Wolf Creek

**HYDROLOGIC UNIT:** 06010102

**SEGMENT ID.:** VAS-O06R_WLF01A98 **TMDL MAP ID:** VAS-O06R-01

**SEGMENT SIZE:** 8.67 - Miles

**INITIAL LISTING:** 1998 **TMDL Schedule:** 2010 - 2014

**UPSTREAM LIMIT:**

**DESCRIPTION:** Town Creek confluence

**RIVER MILE:** 8.77

**LATITUDE:** 36.68583 **LONGTITUDE:** -81.98083

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** Headwaters South Holston Lake

**RIVER MILE:** 0.97

**LATITUDE:** 36.62639 **LONGTITUDE:** -81.98306

The segment extends from the confluence with Town Creek, just south of Abingdon, to the headwaters of South Holston Lake.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Fish Consumption Use - Threatened

| IMPAIRMENT CAUSE: | IMPAIRMENT SOURCE |
|---|---|
| Fish Tissue - PCBs | NPS - Urban/Agriculture |
| | Unknown |

**SUMMARY:**

Biological sampling in this reach, 6CWLF004.10 is moderately impaired. At a 1997 special study station, 6CWLF006.55, PCB was found in fish tissue to exceed the human health screening value.

The source of benthic impairment may be agricultural and urban nonpoint sources. The source of PCB's are unknown. Phosphate exceedences may be due to agriculture and urban nonpoint source runoff as well.

# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Washington, Bristol, City of

**STREAM NAME:** Beaver Creek

**HYDROLOGIC UNIT:** 06010102

**SEGMENT ID.:** VAS-O07R_BEV01A94, **TMDL MAP ID:** VAS-O07R-01

**SEGMENT SIZE:** 13.46 - Miles

**INITIAL LISTING:** 1994 **TMDL Schedule:** 2002 - 2004

**UPSTREAM LIMIT:**

**DESCRIPTION:** Route 611 Bridge

**RIVER MILE:** 28.73

**LATITUDE:** 36.70917 **LONGTITUDE:** -82.04500

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** Tennessee State line

**RIVER MILE:** 15.27

**LATITUDE:** 36.59472 **LONGTITUDE:** -82.18583

The segment extends from the Route 611 bridge near the headwaters of Beaver Creek to the state line. Beaver Creek flows through the City of Bristol. Milage changes from 1998 list are due to NHD corrections as to the location of the upstream point.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Aquatic Life Use - Threatened

| IMPAIRMENT CAUSE: | IMPAIRMENT SOURCE |
|---|---|
| General Standard (Benthic) | NPS - Urban |
| | NPS - Agriculture |
| General Standard (Sediment-Pb) | Unknown |

**SUMMARY:**

Chemical data is available from ambient stations, 6CBEV021.07 and 6CBEV015.27, with fecal violations. Tennessee Department of Natural Resource data also shows fecal violations. Biological stations, 6CBEV023.99 and 6CBEV024.60, show benthic impacts. Sediment analysis at 6CBEV015.27 indicates that lead exceeds the ER-M guideline value. However, the station at 6CBEV021.07 does not have a lead exceedence. More study is needed to determine extents to benthic impairment.

Beaver Creek flows through an intense agricultural area as well as being an urban stream as it crosses the state line. Both of these land uses contribute to water quality impacts. DCR ranks the watershed high for overall nonpoint source potential impacts.
Projects implementing best management practices have been funded and continue to be pursued to address agricultural impacts.

# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Smyth

**STREAM NAME:** North Fork Holston River

**HYDROLOGIC UNIT:** 06010101

**SEGMENT ID.:** VAS-O09R_NFH01A98 **TMDL MAP ID:** VAS-O09R-02

**SEGMENT SIZE:** 1.8 - Miles

**INITIAL LISTING:** 1998 **TMDL Schedule:** 2002 - 2004

**UPSTREAM LIMIT:**

**DESCRIPTION:** Crewey Branch confluence

**RIVER MILE:** 99.24

**LATITUDE:** 36.91444 **LONGTITUDE:** -81.61333

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** Locust Cove Creek confluence

**RIVER MILE:** 97.44

**LATITUDE:** 36.93222 **LONGTITUDE:** -81.62861

This segment of the North Fork Holston River extends from the Crewey Branch confluence to the Locust Cove Creek confluence. Crewey Branch follows Route 631 and Locust Cove Creek is near Route 42 in Smyth County. In 1998 this segment was 5.69 miles long, however 4.18 miles falls in VAS-O10R instead of all in VAS-O09R.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Aquatic Life Use - Threatened

| IMPAIRMENT CAUSE: | IMPAIRMENT SOURCE |
|---|---|
| General Standard (Benthic) | Unknown |
| General Standard (DDT) | |

**SUMMARY:**

Sediment analysis at an special station, 6CNFH097.67, revealed DDT value exceedence of the ER-M guideline value. This segment has TVA station 807602 and a DEQ biological monitoring station, 6CNFH098.47, which were both rated good and not impaired for aquatic life uses, respectively. In 1998, data from the biological monitoring station appeared to indicate a threat to aquatic life use. Additional monitoring has changed this assessment for 2002 to not impaired for aquatic life use. This segment is actually in two watersheds.

The landuse in this watershed is predominately agricultural. However the DDT source is unknown. The remaining 4.18 miles of this 1998 listed TMDL segment are included in VAS-O10R-04.

# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Smyth

**STREAM NAME:** North Fork Holston River

**HYDROLOGIC UNIT:** 06010101

**SEGMENT ID.:** VAS-O10R_NFH01A94 **TMDL MAP ID:** VAS-O10R-01

**SEGMENT SIZE:** 1.84 - Miles

**INITIAL LISTING:** 1994 **TMDL Schedule:** 2004 - 2006

**UPSTREAM LIMIT:**

**DESCRIPTION:** Saltville above Olin Matheson Plant site

**RIVER MILE:** 85.4

**LATITUDE:** 36.89083 **LONGTITUDE:** -81.74944

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** Robertson Branch confluence

**RIVER MILE:** 83.56

**LATITUDE:** 36.88667 **LONGTITUDE:** -81.77000

This segment of the mainstem of North Fork Holston River begins in Saltville and ends at the confluence of Robertson Branch, which is the watershed boundary. The segment brackets the closed Olin Matheson Plant.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Aquatic Life Use - Threatened

| IMPAIRMENT CAUSE: | IMPAIRMENT SOURCE |
|---|---|
| VDH Health Advisory (Hg) | Olin Matheson Plant Site |
| General Standard (DDT) | Unknown |

**SUMMARY:**

Mercury contamination of the fish tissue in North Fork Holston River prior to 1972 led to a ban on fish consumption by the Virginia Health Department. The ban extends downstream for 80.4 miles, through watersheds; VAS-O11R, VAS-O12R, and VAS-O13R. A sediment sample at 6CNFH097.67 had DDT.

The Olin Matheson Plant site is the mercury source. In 1982 actions to cleanup mercury contamination were undertaken by Olin at the direction of Virginia Agencies. EPA and Olin are collaborating on mitigation/control of nonpoint source runoff at the site.

# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Smyth

**STREAM NAME:** North Fork Holston River

**HYDROLOGIC UNIT:** 06010101

**SEGMENT ID.:** VAS-O10R_NFH03A98 **TMDL MAP ID:** VAS-O10R-04

**SEGMENT SIZE:** 4.18 - Miles

**INITIAL LISTING:** 1998 **TMDL Schedule:** 2002 - 2004

**UPSTREAM LIMIT:**

**DESCRIPTION:** Locust Cove Creek confluence

**RIVER MILE:** 97.44

**LATITUDE:** 36.89083 **LONGTITUDE:** -81.74944

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** Laurel Creek confluence

**RIVER MILE:** 93.26

**LATITUDE:** 36.88667 **LONGTITUDE:** -81.77000

This segment of the mainstem of North Fork Holston River begins at Locust Cove confluence and ends downstream at Laurel Creek. The segment is upstream of the Olin site. This is the downstream 4.18 miles of a 5.69 mile segment which was listed in 1998 as falling completely in VAS-O09R.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Aquatic Life Use - Threatened

| IMPAIRMENT CAUSE: | IMPAIRMENT SOURCE |
|---|---|
| General Standard (Benthic) | Unknown |
| General Standard (DDT) | |

**SUMMARY:**

Sediment analysis at an special station, 6CNFH097.67, revealed DDT value exceedence of the ER-M guideline value. This segment has TVA station 807602 and a DEQ biological monitoring station, 6CNFH098.47, which were both rated good and not impaired for aquatic life uses, respectively. In 1998, data from the biological monitoring station indicate a partial impairment for aquatic life use. Additional monitoring has changed this assessment for 2002 to not impaired for aquatic life use. The station needs to be delisted.

The landuse in this watershed is predominately agricultural. However the DDT source is unknown. Miles from the 1998 TMDL list included this segment and VAS-O09R-02 as well.

# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Smyth

**STREAM NAME:** Laurel Creek

**HYDROLOGIC UNIT:** 06010101

**SEGMENT ID.:** VAS-O10R_LAE02A02 **TMDL MAP ID:** VAS-O10R-03

**SEGMENT SIZE:** 6.41 - Miles

**INITIAL LISTING:** 2002 **TMDL Schedule:** -

**UPSTREAM LIMIT:**

**DESCRIPTION:** Little Tumbling Creek confluence

**RIVER MILE:** 6.41

**LATITUDE:** 36.97056 **LONGTITUDE:** -81.62556

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** North Fork Holston River confluence

**RIVER MILE:** 0.00

**LATITUDE:** 36.91806 **LONGTITUDE:** -81.67333

This segment of Laurel Creek extends from confluence with Little Tumbling Creek at Route 91downstream to its confluence with North Fork Holston River.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Aquatic Life Use - Threatened

| IMPAIRMENT CAUSE: | IMPAIRMENT SOURCE |
|---|---|
| General Standard (Benthic) | Unknown |

**SUMMARY:**

The biological station, 6CLAE001.68, was rated as threatened.

This watershed is within the Jefferson National Forest. Silvacultural activities are the predominate land use.

# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Washington

**STREAM NAME:** North Fork Holston River

**HYDROLOGIC UNIT:** 06010101

**SEGMENT ID.:** VAS-O11R_NFH03A94 **TMDL MAP ID:** VAS-O11R-03

**SEGMENT SIZE:** 4.79 - Miles

**INITIAL LISTING:** 1994 **TMDL Schedule:** 2004 - 2006

**UPSTREAM LIMIT:**

**DESCRIPTION:** Robertson Branch confluence

**RIVER MILE:** 83.56

**LATITUDE:** 36.88667 **LONGTITUDE:** -81.77000

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** Tumbling Creek confluence

**RIVER MILE:** 78.77

**LATITUDE:** 36.86361 **LONGTITUDE:** -81.83778

This segment is the mainstem of North Fork Holston River, from Robertson Branch in Saltville, to Tumbling Creek. Mileage has been decreased because of the NHD data layer.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Aquatic Life Use - Threatened

| IMPAIRMENT CAUSE: | IMPAIRMENT SOURCE |
|---|---|
| VDH Health Advisory (Hg) | Olin Matheson Plant Site |
| General Standard (Benthic) | Olin Matheson Plant Site |
| General Standard (Sediment - Hg) | |

**SUMMARY:**

Mercury contamination of the fish tissue in North Fork Holston River prior to 1982 led to a ban on fish consumption by the Virginia Health Department. The ban extends downstream for 80.4 miles, through watersheds; VAS-O11R, VAS-O12R, and VAS-O13R. The partially supporting aquatic life use designation is the result of a biological monitoring station, 6CNFH080.45, rated moderately impaired last sampled in 1993. No benthic data fell within the 2002 assessment window and thus is not listed as impaired for benthics in 2002-305b report. Aquatic life use is further threatened because the ambient water quality monitoring station, 6CNFH080.43, has mercury value exceedences in sediment samples.

The Olin Matheson Plant site is the mercury source. In 1982 actions to cleanup mercury contamination were undertaken by Olin at the direction of Virginia Agencies. EPA and Olin are collaborating on mitigation/control of nonpoint source runoff at the site. Mercury in the sediments as well as Mercury in fish tissue is a result of this source. The benthic impairment source is unknown.

# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Washington

**STREAM NAME:** Toole Creek

**HYDROLOGIC UNIT:** 06010101

**SEGMENT ID.:** VAS-O11R_TOO01A98 **TMDL MAP ID:** VAS-O11R-00

**SEGMENT SIZE:** 6 - Miles

**INITIAL LISTING:** 1998 **TMDL Schedule:** -

**UPSTREAM LIMIT:**

**DESCRIPTION:** headwaters

**RIVER MILE:** 6.00

**LATITUDE:** 36.75833 **LONGTITUDE:** -81.95694

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** North Fork Holston River confluence

**RIVER MILE:** 0.00

**LATITUDE:** 36.79833 **LONGTITUDE:** -81.99639

This segment includes the entire mainstem of Toole Creek. It lies north of Abingdon and flows parallel to Route 692 near Whites Mill.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Aquatic Life Use - Threatened

| IMPAIRMENT CAUSE: | IMPAIRMENT SOURCE |
|---|---|
| General Standard (Benthic) | NPS - Agriculture |

**SUMMARY:**

A biological monitoring site, 6CTOO000.35 was rated moderately impaired. Additional monitoring is recommended.

The source may be agricultural.

# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Washington

**STREAM NAME:** North Fork Holston River

**HYDROLOGIC UNIT:** 06010101

**SEGMENT ID.:** VAS-O11R_NFH01A00 **TMDL MAP ID:** VAS-O11R-01

**SEGMENT SIZE:** 1.9 - Miles

**INITIAL LISTING:** 1994 **TMDL Schedule:** 2004 - 2006

**UPSTREAM LIMIT:**

**DESCRIPTION:** Brumley Creek confluence

**RIVER MILE:** 64.13

**LATITUDE:** 36.79167 **LONGTITUDE:** -82.01611

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** Cabin Creek confluence

**RIVER MILE:** 62.23

**LATITUDE:** 36.78250 **LONGTITUDE:** -82.03917

This segment is the mainstem of North Fork Holston River, extending from Brumley Creek to Cabin Creek, near Brumley Gap.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Aquatic Life Use - Threatened

| IMPAIRMENT CAUSE: | IMPAIRMENT SOURCE |
|---|---|
| Fish Tissue - Mercury | Olin Matheson Plant Site |
| General Standard (Sediment-PCP, Hg) | Olin Matheson Plant Site |
| | Unknown |

**SUMMARY:**

Mercury contamination of the fish tissue in North Fork Holston River prior to 1982 led to a ban on fish consumption by the Virginia Health Department. The ban extends downstream for 80.4 miles, through watersheds; VAS-O11R, VAS-O12R, and VAS-O13R. This segment is also threatened due to sediments detected above the guideline values for PCP and Mercury.

The Olin Matheson Plant site is the mercury source. In 1982 actions to cleanup mercury contamination were undertaken by Olin at the direction of Virginia Agencies. EPA and Olin are collaborating on mitigation/control of nonpoint source runoff at the site. Mercury in the sediments as well as Mercury in fish tissue is a result of this plant. The PCP source is unknown.

# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Washington

**STREAM NAME:** North Fork Holston River

**HYDROLOGIC UNIT:** 06010101

**SEGMENT ID.:** VAS-O12R_NFH01A94,_ **TMDL MAP ID:** VAS-O12R-01

**SEGMENT SIZE:** 35.42 - Miles

**INITIAL LISTING:** 1994 **TMDL Schedule:** 2004 - 2006

**UPSTREAM LIMIT:**

**DESCRIPTION:** Cabin Creek confluence

**RIVER MILE:** 62.23

**LATITUDE:** 36.78250 **LONGTITUDE:** -82.03917

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** Cove Creek confluence

**RIVER MILE:** 26.81

**LATITUDE:** 36.65278 **LONGTITUDE:** -82.38972

This segment is the mainstem of North Fork Holston River, from Cabin Creek to confluence with Abrams Creek. The segment extends the entire length of the waterbody and passes near Mongle Spring, Holston, Alum Wells, Pine Grove to Mendota. This is part of the 80.4 mile Fish Consumption segment which extends from Saltville to Tennessee State Line.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Aquatic Life Use - Threatened

| IMPAIRMENT CAUSE: | IMPAIRMENT SOURCE |
|---|---|
| VDH Health Advisory (Hg) | Olin Matheson Plant Site |
| General Standard (Sediment-Hg, PCP) | Olin |
| Fish Tissue - Mercury | |

**SUMMARY:**

Mercury contamination of the fish tissue in North Fork Holston River prior to 1972 led to a ban on fish consumption by the Virginia Health Department. The ban extends downstream for 80.4 miles, through watersheds; VAS-O10R, VAS-O11R, and VAS-O13R. Aquatic life use is threatened due to mercury exceedences in sediments and fish consumption is not supporting due to mercury exceedences in fish tissue at station, 6CNFH039.18 (ADB ID NFH01C02). An ambient station at 6CNFH059.65 (ADB ID NFH02A00) and 6CNFH060.93 benthic station in this reach had sediment hits for Mercury and PCP.

The Olin Mathiason Plant site is the mercury source. In 1982 actions to cleanup mercury contamination were undertaken by Olin at the direction of Virginia Agencies. EPA and Olin are collaborating on mitigation/control of nonpoint source runoff. Mercury in the sediments and fish tissue is from this plant.

# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Washington

**STREAM NAME:** Greendale Creek

**HYDROLOGIC UNIT:** 06010101

**SEGMENT ID.:** VAS-O12R_GRN01A00 **TMDL MAP ID:** VAS-O12R-02

**SEGMENT SIZE:** 5 - Miles

**INITIAL LISTING:** 2002 **TMDL Schedule:** -

**UPSTREAM LIMIT:**

**DESCRIPTION:** headwaters

**RIVER MILE:** 5.00

**LATITUDE:** 36.71833 **LONGTITUDE:** -82.04889

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** North Fork Holston River confluence

**RIVER MILE:** 0.00

**LATITUDE:** 36.77417 **LONGTITUDE:** -82.07139

This segment includes the entire length of Greendale Creek from its headwaters near Route 633 to its confluence with North Fork Holston River. The stream flows along U. S. Route 19 for most of its five mile length. It is located northeast of Abingdon and flows through the community of Greendale.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Aquatic Life Use - Threatened

| IMPAIRMENT CAUSE: | IMPAIRMENT SOURCE |
|---|---|
| General Standard (Benthic) | Unknown |

**SUMMARY:**

A single visit to this biological station at 6CGRN000.06 indicates the stream is threatened for benthics.

The source is unknown.

# 2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

**RIVER BASIN:** TENNESSEE/BIG SANDY RIVER BASIN

**CITY/COUNTY:** Scott

**STREAM NAME:** North Fork Holston River

**HYDROLOGIC UNIT:** 06010101

**SEGMENT ID.:** VAS-O13R_NFH01A94 **TMDL MAP ID:** VAS-O13R-01

**SEGMENT SIZE:** 5.29 - Miles

**INITIAL LISTING:** 1994 **TMDL Schedule:** 2004 - 2006

**UPSTREAM LIMIT:**

**DESCRIPTION:** Big Moccasin Creek confluence

**RIVER MILE:** 8.29

**LATITUDE:** 36.60889 **LONGTITUDE:** -82.54444

**DOWNSTREAM LIMIT:**

**DESCRIPTION:** Tennessee State Line

**RIVER MILE:** 3.00

**LATITUDE:** 36.59361 **LONGTITUDE:** -82.60917

This segment is the mainstem of North Fork Holston River, from Big Moccasin Creek confluence to the Tennessee State line. This portion of North Fork Holston River is south of Weber City and parallel to Route 714.

**CLEAN WATER ACT GOAL AND USE SUPPORT:**

Aquatic Life Use - Threatened

| IMPAIRMENT CAUSE: | IMPAIRMENT SOURCE |
|---|---|
| VDH Health Advisory (Hg) | Olin Matheson Plant Site |
| Fecal Coliform | NPS - Urban |
| General Standard (Benthic,Sediment-Hg) | NPS - Urban |

**SUMMARY:**

Mercury contamination of the fish tissue in North Fork Holston River prior to 1972 led to a ban on fish consumption by the Virginia Health Department. The ban extends downstream for 80.4 miles, through watersheds; VAS-O11R, VAS-O12R, and VAS-O13R. Fecal coliform samples at an ambient station, 6CNFH008.78, exceed water quality standards in 8 of 40 samples. This results in a partially supporting assessment for swimmable use for 1998, however, 2002 assessment has 5 of 52 samples with fecal coliform violations. Only one violation of the last 24 samples in the last 2 years. It can be delisted for swimmable use. A benthic station at 6CNFH007.78 is rated moderately impaired.

The Olin Matheson Plant site is the mercury source. In 1982 actions to cleanup mercury contamination were undertaken by Olin at the direction of Virginia Agencies. EPA and Olin are collaborating on mitigation/control of nonpoint source runoff at the site. Fecal coliform violations and the benthic impairment are probably due to urban nonpoint sources.